

Bushfire Assessment Report

Proposed:
Sand Quarry

At:
**3631 Nelson Bay Road,
Bobs Farm**

Reference Number: 260397

14 May 2026



Prepared By:
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Version Control				
Version	Date	Author	Reviewed by	Details
1	09/03/2026	Andrew Muirhead	Stuart McMonnies	Final Report
2	26/03/2026	Andrew Muirhead		Updated Report
3	2/04/2026	Andrew Muirhead		Final Report
4	13/04/2026	Andrew Muirhead		Project Description Update
5	14/05/2026	Andrew Muirhead		Updated Plan

List of Abbreviations:

APZ	Asset Protection Zone
AS3959	Australian Standard 3959 'Construction of buildings in bushfire-prone areas' – 2018
BAL	Bushfire Attack Level
BPMs	Bushfire Protection Measures
BPLM	Bushfire Prone Land Map
Council	Port Stephens Council
ELVIS	Elevation and Depth Foundation Spatial Data
EP&A Act	<i>Environmental Planning and Assessment Act - 1979</i>
FRNSW	Fire and Rescue NSW
IPA	Inner Protection Area
NASH	National Association of Steel-framed Housing
NCC	National Construction Code
NP	National Park
NSP	Neighbourhood Safer Place
OPA	Outer Protection Area
PBP	<i>Planning for Bush Fire Protection – 2019</i>
ROW	Right of Way
RF Act	<i>Rural Fires Act - 1997</i>
RFS	NSW Rural Fire Service
SEPP	State Environmental Planning Policy
SFPP	Special Fire Protection Purpose
SSD	State Significant Development
SWS	Static Water Supply

Executive Summary:

This Bush Fire Assessment Report has been prepared by Building Code and Bushfire Hazard Solution P/L. It accompanies an Environmental Impact Statement (**EIS**) in support of a State Significant Development Application for a sand quarry at 3631 Nelson Bay Road, Bobs Farm (**the site**).

Through the State Significant Development Application (SSDA) process, the applicant is seeking to develop the site for an extractive industry as a sand quarry. Consent is sought for annual extraction of 530,000tpa for 10 years, equating to a total life-of-quarry of approximately 4.4 million tonnes. It is anticipated the proposal will average sales of 10,000 to 12,000 tonnes per week.

The site has an area of approximately 40.9ha with the proposal seeking to use most of the subject site for extractive industry purposes with the exception of:

- A minimum 15m buffer between the site boundary and any areas of extraction
- The existing right-of-carriage way including a 3m buffer in the north-east of the site including the area east of this right-of-carriageway
- The existing electricity easement including a 3m buffer at the southern end of the site and the vegetated area to the south of this easement

No dredging is proposed with only dry (surface) sand extraction being employed.

Preparation of the site and proposed sand quarry operations would broadly comprise:

- Construction of a new left-in left-out intersection
- Establishment of processing and sales area including installation of onsite office (Atco structure), installation of screening and wash facilities, designation of stockpiling areas, associated ancillary structures, and use of the existing dwelling at the site for a manager's residence
- Staged vegetation clearing and topsoil stripping in accordance with the approved staging plan with topsoil stored onsite to be used for future rehabilitation works.
- Dry extraction down to a maximum of 0.7m above the ground water table
- Ongoing rehabilitation

Day-to-day operations would require two (2) articulated haul trucks (Volvo A40G) loaded by a hydraulic excavator (Volvo EC350) to transport sand from the extraction area to the on-site processing facility being a full electric screen and wash plant. Equipment will include excavators, front-end loaders, haul trucks, conveyors and water carts. Operations will utilise modern, well-maintained equipment incorporating advanced noise attenuation and water saving measures as well as fuel efficiency technology to reduce operational impacts on the surrounding environment.

The site benefits from a Water Access Licence (WAL5960) for 40ML per annum which is proposed to be used for sand washing purposes. Approximately 85% of extracted sand will be washed requiring a total of approximately 32ML per annum which is within the current Water Access Licence.

All essential services are available, or able to be made available, at the site including electricity, water tanks for potable water, pump-out system for sewage management, stormwater drainage and suitable vehicular access.

Sales would be by haulage truck at a maximum of ten (10) loaded trucks per hour equating to a maximum of 120 loaded trucks per day but with an average of 46 loaded trucks per day. All transport trucks would travel east along Nelson Bay Road and complete a U-turn at the Port Stephens Drive roundabout. Haulage trucks will be prohibited from using Marsh Road.

The site will be accessed by way of a new left-in left-out intersection onto Nelson Bay Road. The existing access to the site at the electricity easement is proposed to be retained for light vehicle access for the quarry as well as for access to the manager's residence.

Progressive rehabilitation of exhausted areas will take place in accordance with the approved rehabilitation plan. The proposed post-quarry use of the site is to return the site to its current condition, being the same ratio of vegetated land and land used for the purpose of extensive agriculture.

There is a more detailed project description within the Environmental Impact Statement.

The Minister for Planning, or their delegate, is the consent authority for the SSDA and this application has been lodged with the NSW Department of Planning, Housing and Infrastructure (**NSW DPHI**) for assessment.

In this instance the site is depicted on Port Stephens Council's Bushfire Prone Land Map (**BPLM**) as containing designated Vegetation Category 1 and 3. The site is therefore considered 'bushfire prone'.

In relation to this application one of the key issues identified in the Secretary's Environmental Assessment Requirements (**SEARs**) dated 18 December 2025 is an assessment of potential hazards and risks, which lists bushfire as a consideration. Therefore, this assessment details proposed bush fire protection measures and demonstrates compliance with *Planning for Bush Fire Protection* 2019 (**PBP**).

The vegetation identified as posing a hazard was found to be located to the southeast within Worimi National Park and northwest within the subject property. For the purpose of assessment under Planning for Bush Fire Protection the vegetation posing a hazard has been determined to be Forest.

It has been acknowledged that there is a 15 metre buffer retained along the perimeter of the site which has been assessed as a Remnant hazard in accordance with A1.11.1 of PBP.

The application of PBP requires satisfactory demonstration of the aim and objectives and the specific objectives and Bushfire Protection Measures detailed in Chapter 8 'Other Development' of PBP.

In accordance with section 8.3.10 of PBP the measures, including Asset Protection Zones (**APZs**), for Infill Residential Development (Chapter 7) should be used as a base for the development of a package of measures for commercial and industrial development.

The Acceptable Solution under Table 7.4a of PBP requires APZs be provided in accordance with Table A1.12.2 or bushfire design modelling demonstrating the maximum radiant heat will not exceed 29kW/m², consistent with that for residential subdivisions.

The minimum required APZs in accordance with A1.12.2 of PBP are 11 metres to the remnant hazard to the east, 29 metres to the forest hazard to the southeast and 24 metres to the forest hazard to the northwest.

The APZs to the office were measured to be >34 metres to the remnant hazard to the east, >91 metres to the forest hazard to the southeast and >115 metres to the forest hazard to the northwest, significantly exceeding the minimum required APZs.

It is acknowledged that there is a fuel bay being installed next to the existing hardstand and a 100 metre APZ will be required around this fuel bay.

The proposed office will be constructed to sections 3 and 5 (BAL 12.5) under AS3959 – 2018 and the additional construction requirements detailed in section 7.5 of PBP.

The retained managers residence is to be upgraded to improve ember protection. This is to be achieved by enclosing all openings (excluding roof tile spaces) or covering openings with a non-corrosive metal screen mesh with a maximum aperture of 2mm. Where applicable, this includes openable windows, vents, weepholes and eaves. External doors are to be fitted with draft excluders.

The proposed 20,000L Static Water Supply and proposed access will provide emergency services adequate access and replenishment of attending fire trucks.

It is our opinion the proposal can satisfy all relevant specifications and requirements of *Planning for Bush Fire Protection 2019*.

1.0 Introduction

This Bush Fire Assessment Report has been prepared by Building Code and Bushfire Hazard Solution P/L. It accompanies an Environmental Impact Statement (EIS) in support of a State Significant Development Application for a sand quarry at 3631 Nelson Bay Road, Bobs Farm (the site).

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The site has an area of approximately 40.9ha with the proposal seeking to use most of the subject site for extractive industry purposes with the exception of:

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No dredging is proposed with only dry (surface) sand extraction being employed.

Preparation of the site and proposed sand quarry operations would broadly comprise:

- Construction of a new left-in left-out intersection
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Day-to-day operations would require two (2) articulated haul trucks (Volvo A40G) loaded by a hydraulic excavator (Volvo EC350) to transport sand from the extraction area to the on-site processing facility being a full electric screen and wash plant. Equipment will include excavators, front-end loaders, haul trucks, conveyors and water carts. Operations will utilise modern, well-maintained equipment incorporating advanced noise attenuation and water saving measures as well as fuel efficiency technology to reduce operational impacts on the surrounding environment.

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Sales would be by haulage truck at a maximum of ten (10) loaded trucks per hour equating to a maximum of 120 loaded trucks per day but with an average of 46 loaded trucks per day. All transport trucks would travel east along Nelson Bay Road and complete a U-turn at the Port Stephens Drive roundabout. Haulage trucks will be prohibited from using Marsh Road.

The site will be accessed by way of a new left-in left-out intersection onto Nelson Bay Road. The existing access to the site at the electricity easement is proposed to be retained for light vehicle access for the quarry as well as for access to the manager's residence.

Progressive rehabilitation of exhausted areas will take place in accordance with the approved rehabilitation plan. The proposed post-quarry use of the site is to return the site to its current condition, being the same ratio of vegetated land and land used for the purpose of extensive agriculture.

There is a more detailed project description within the Environmental Impact Statement.

In this instance the subject site is depicted on Council's Bushfire Prone Land Map as containing Category 1 and 3 Vegetation. The subject site is therefore considered 'bushfire prone land'.

In relation to this application one of the key issues identified in the Secretary's Environmental Assessment Requirements (SEARs) is an assessment of potential hazards and risks, which lists bushfire as a consideration. Therefore, this assessment details proposed bush fire protection measures and demonstrates compliance with *Planning for Bush Fire Protection 2019* (PBP).

The proposed office will be constructed to sections 3 and 5 (BAL 12.5) under AS3959 – 2018 and the additional construction requirements detailed in section 7.5 of PBP.

The retained managers residence is to be upgraded to improve ember protection. This is to be achieved by enclosing all openings (excluding roof tile spaces) or covering openings with a non-corrosive metal screen mesh with a maximum aperture of 2mm. Where applicable, this includes openable windows, vents, weepholes and eaves. External doors are to be fitted with draft excluders.

As the development is on bushfire prone land this report has been prepared to address the relevant specifications and requirements as detailed in PBP.

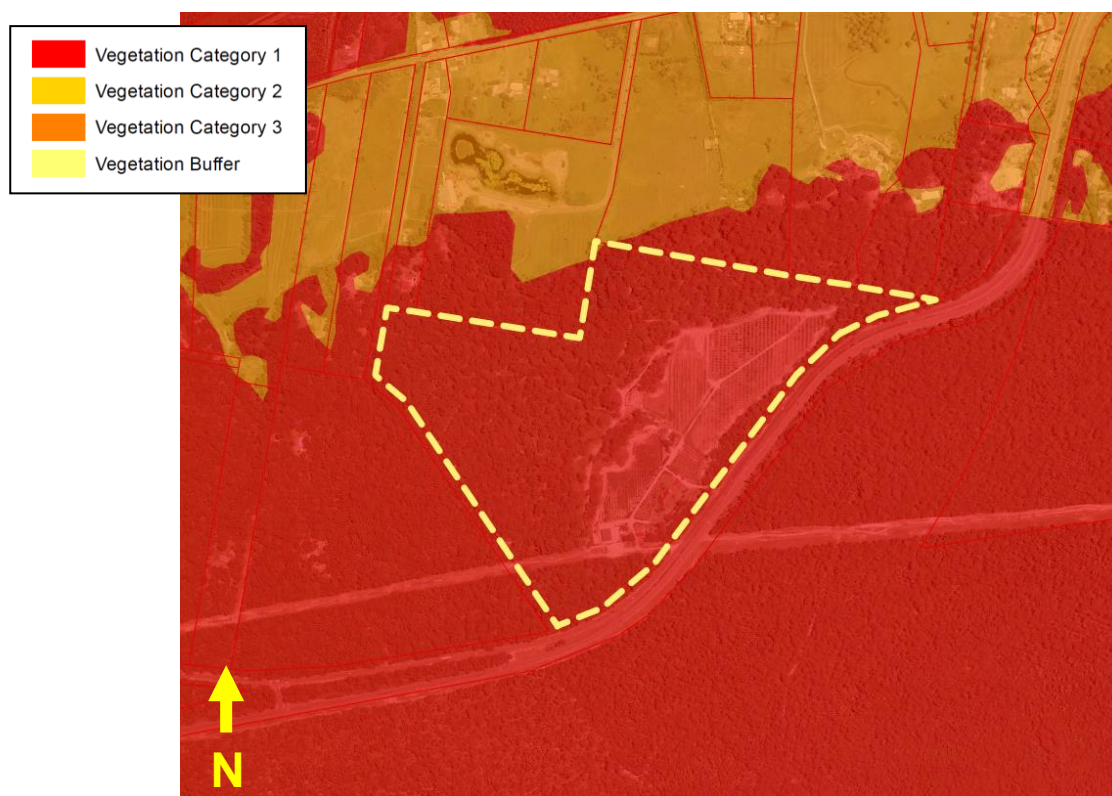


Figure 01: Excerpt from Council's Bushfire Prone Land Map

2.0 Legislative Requirements

The site is subject to the following legislative provisions as it relates to bushfire planning and protection:

- *Environmental Planning & Assessment Act 1979*
- *Planning for Bush Fire Protection*

2.1 *Environmental Planning & Assessment Act 1979*

Section 10.3 requires councils, where a Bush Fire Risk Management Plan applies, to record a bush fire prone land map after consulting with the Commissioner of the NSW Rural Fire Service (NSW RFS). The Commissioner will designate lands to be bush fire prone within an area and, when satisfied that the lands have been recorded on a map, certify the map as the Bush Fire Prone Land map.

The subject site is designated as Bushfire Prone Land (Figure 01).

As the proposal is subject to Part 4.7 of the Act section 100B of the *Rural Fires Act 1997* does not apply in accordance with s4.41. This means that the proposed development does not require authorisation in respect of bush fire safety.

In relation to this application one of the key issues identified in the Secretary's Environmental Assessment Requirements (SEARs) is an assessment of potential hazards and risks, which lists bushfire as a consideration. Therefore, this assessment details proposed bush fire protection measures and demonstrates compliance with *Planning for Bush Fire Protection 2019* (PBP).

2.2 *Planning for Bush Fire Protection*

As the subject site is identified as being bushfire prone and the proposed development involves construction of a Class 5 to 8 building the proposal is subject to the application of the relevant specifications and requirements of *Planning for Bush Fire Protection*.

The proposal is required to demonstrate that it achieves compliance with the following Chapters of PBP:

- Chapter 1 - Aim and Objectives
- Chapter 8 – Other Development

2.0 Purpose of Report

The purpose of this Bushfire Assessment Report is to provide an independent bushfire assessment of the subject site and surrounding area and to determine if the State Significant Development will comply with the relevant specifications and requirements of *Planning for Bush Fire Protection 2019*.

This report specifically addresses the Bush Fire Risk as identified in the issued Secretary's Environmental Assessment Requirements (SEARs) dated 18 December 2025.

3.0 Scope of this Report

The scope of this report is limited to providing a bushfire assessment and recommendations for the subject property. Where reference has been made to the surrounding lands, this report does not purport to directly assess those lands; rather it may discuss bushfire impact and/or progression through those lands and possible bushfire impact to the subject property.

4.0 Aerial view & Masterplan

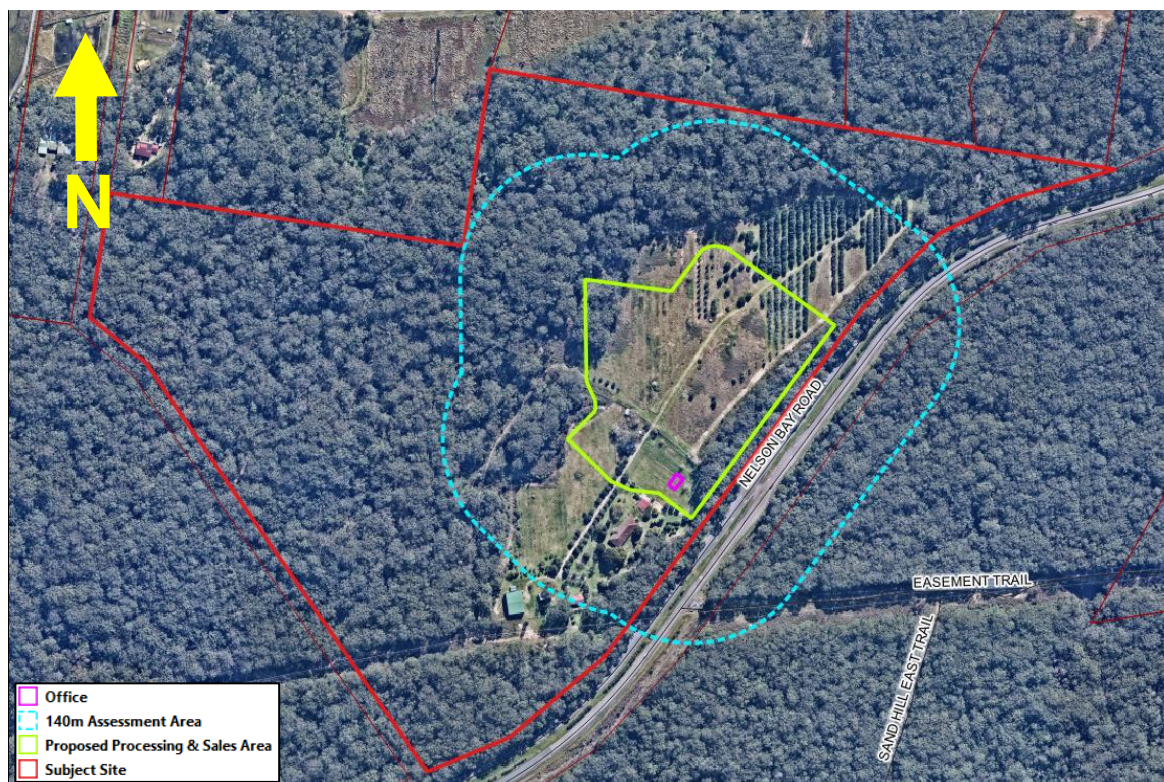
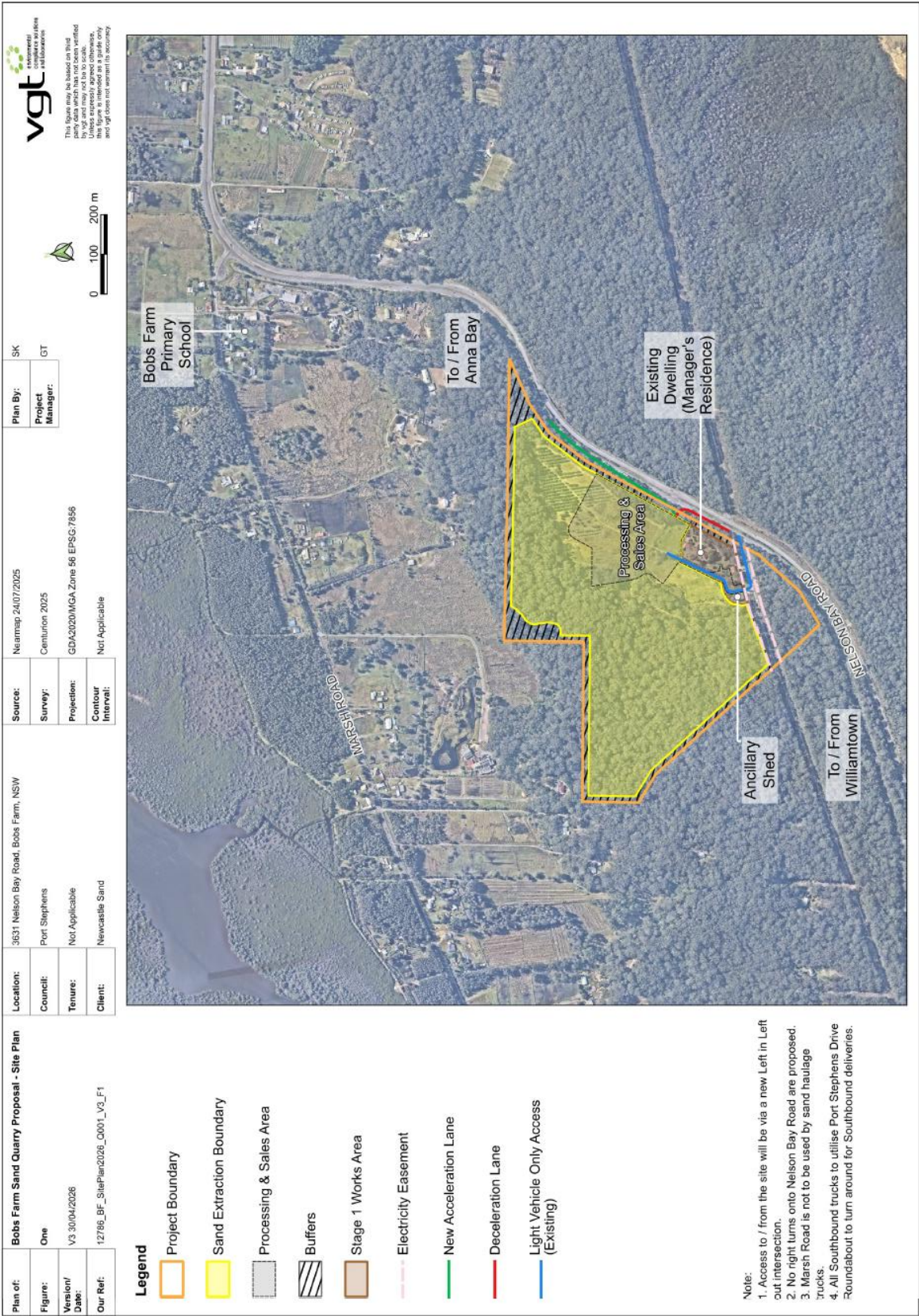


Figure 02: Aerial view of the subject site
Courtesy Nearthmaps



5.0 Site Assessment

A detailed site inspection has been undertaken of the subject site by a representative of Building Code and Bushfire Hazard Solutions PL. In addition to the collected site data this assessment has relied on:

- Aerial imagery of the subject area (NSW Spatial Services & Nearmap);
- 1 metre contour mapping of the subject area (Elevation and Depth Foundation Spatial Data – Geoscience Australia)
- NSW Planning Portal Spatial Viewer
- Vegetation Mapping (Vegetation NSW)
- Site Plan prepared by VGT, Reference: 12786_BF_SitePlan2026_Q001_V0_F1

5.01 Location

The subject site comprises of one (1) existing allotment known as 3631 Nelson Bay Road, Bobs Farm (refer to Figure 02) and legally identified as Lot 254 DP 753204.

The subject site is a rural allotment (RU2: Rural Landscape) and is approximately 40.9 hectares in size.

The site has street frontage to Nelson Bay Road to the south and abuts similar zoned allotments to all other aspects.



Figure 04: Extract from street-directory.com.au

5.02 Vegetation

The vegetation structure, connectivity and attributes are fundamental contributors to bushfire behaviour and its movement through the landscape.

As part of this assessment, we have considered the potential bushfire runs that currently exist into the site, as well as the potential fire behaviour and impacts from the retained vegetation within the site.

The vegetation within the subject site was found to comprise of two distinct groups, being either highly modified (orchard and managed gardens) or natural bushland.

In accordance with Appendix 1 'Site Assessment Methodology' of PBP we have undertaken an assessment of all vegetation formations within 140 metres of the development site for each aspect as per Keith (2004).

The vegetation identified as posing a hazard was found to be located to the southeast within Worimi National Park and northwest within the subject property.

The vegetation posing a hazard was found to be mapped as 'Coastal Sands Apple-Blackbutt Forest' (PCT: 3544) (Vegetation NSW), which is a Forest formation.

Therefore, for the purpose of the Planning for Bush Fire Protection the vegetation posing a hazard has been determined to be Forest.

It has been acknowledged that there is a 15 metre buffer retained along the perimeter of the site in which has been assessed as a Remnant hazard in accordance with A1.11.1 of PBP.



Photograph 01: View into vegetation to the southeast



Forest

Photograph 02: View of the vegetation to the south.

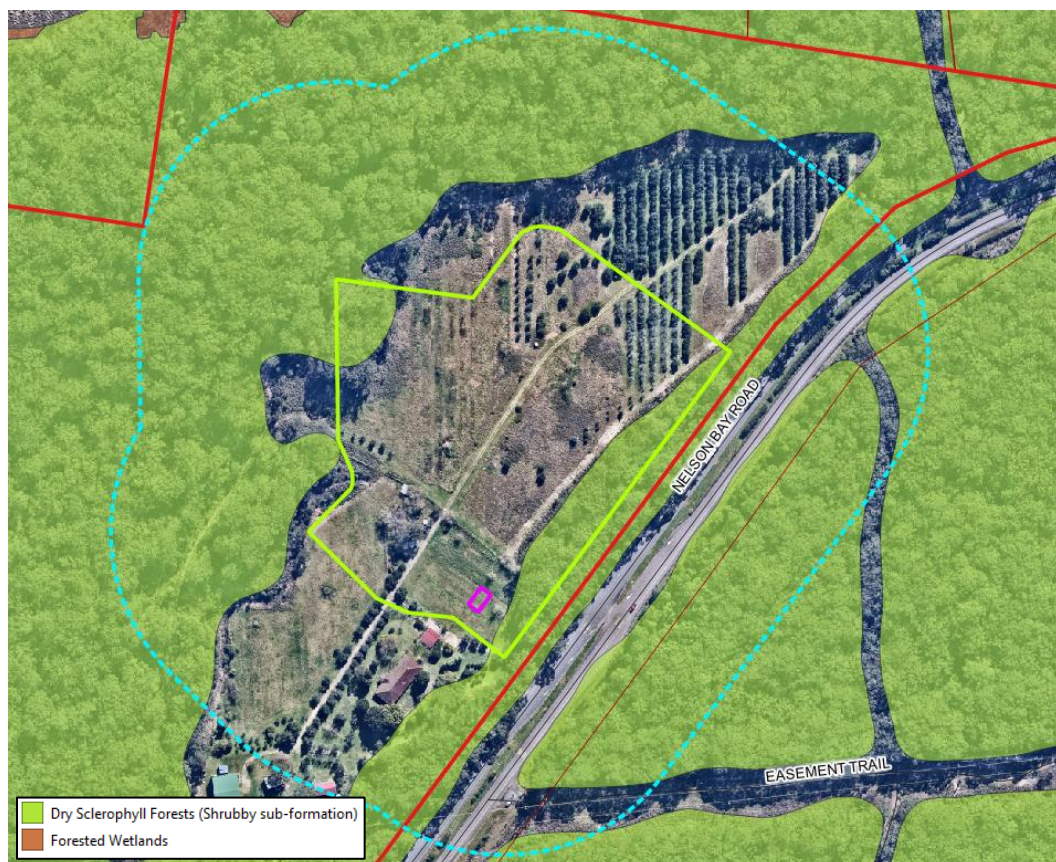


Figure 05: Aerial view of the subject area overlaid with Vegetation NSW mapping

5.03 Slope and Topography

The slope of the land under the classified vegetation has a direct influence on the forward rate of spread, fire intensity and radiant heat exposure. The effective slope is considered to be the slope under the classified vegetation which will most significantly influence bushfire behaviour toward the development site.

In accordance with A1.4 'Determine slope' of PBP the slope assessment is to be derived from the most detailed contour data available.

The slope that would **most significantly** influence bushfire impact was determined onsite using an inclinometer and verified from topographic imagery to be:

- 0 degrees and across slope within the hazard to the east (remnant)
- 0 – 5 degrees down slope within the hazard to the southeast
- 0 degrees and up slope within the hazard to the northwest

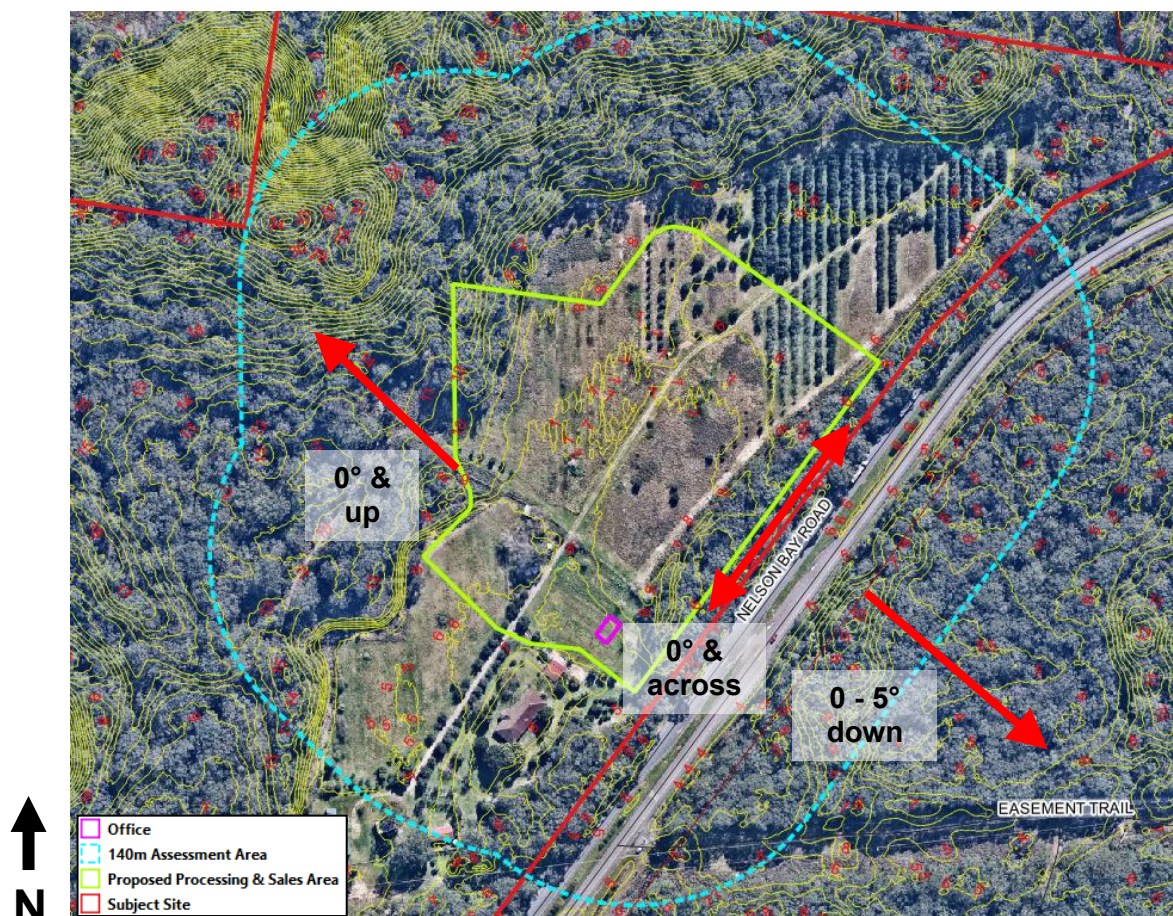


Figure 06: 1 metre LiDar contours of the subject area

5.04 Fire Weather

All development which attracts an Asset Protection Zone under PBP requires the identification of the relevant Fire Danger Index (FDI). The FDI required to be used for development assessment purposes is based on the local government boundaries, being Port Stephens Council in this instance.

In accordance with the NSW Rural Fire Service publication 'NSW Local Government Areas FDI' (2017) Port Stephens Council form part of the Greater Sydney Region Fire Weather District and attracts an FFDI of 100.

6.0 Bushfire Assessment

6.01 Planning for Bush Fire Protection - 2019

Properties considered to be affected by possible bushfire impact are determined from the local Bushfire Prone Land Map as prepared by Council and or the Rural Fire Service.

In this instance the subject site is depicted on Port Stephens Council's Bushfire Prone Land Map (BPLM) as containing designated Vegetation Category 1 and 3. The subject site is therefore considered 'bushfire prone'.

In relation to this application of the issued Secretary's Environmental Assessment Requirements (SEARs) requires a bush fire assessment that details proposed bush fire protection measures and demonstrates compliance with Planning for Bush Fire Protection 2019 (PBP).

The proposal has therefore been assessed against the aim and objectives detailed in Chapter 1 'Introduction' and the specific objectives and bushfire protection measures detailed in Chapter 8 'Other Development' of PBP.

6.02 Bushfire Protection Measures

The National Construction Code does not provide for any bush fire specific performance requirements for Class 5 to 8 structures.

Consideration has also been given to section 8.3.1 'Buildings of Class 5 to 8 under the NCC' of PBP.

Section 8.3.1 of PBP states:

Whilst bush fire is not captured in the NCC for Class 5-8 buildings, the following objectives will be applied in relation to access, water and services, and emergency and evacuation planning:

- *to provide safe access to/from the public road system for firefighters providing property protection during a bush fire and for occupant egress for evacuation;*
- *to provide suitable emergency and evacuation (and relocation) arrangements for occupants of the development;*
- *to provide adequate services of water for the protection of buildings during and after the passage of bush fire, and to locate gas and electricity so as not to contribute to the risk of fire to a building; and*
- *provide for the storage of hazardous materials away from the hazard wherever possible.*

The general fire safety construction provisions (of the NCC) are taken as acceptable solutions however construction requirements for bush fire protection will need to be considered on a case-by-case basis.

The following section addresses each BMP and the proposals compliance or otherwise.

Asset Protection Zones

An Asset Protection Zone (APZ) is an area between the development (in this instance the building footprint) and the identified bushfire hazards where fuels are maintained to a minimum to prevent the spread of fire between a hazard and an asset.

The width of the APZ is determined by the vegetation structure of the identified hazard, Forest Fire Danger Index, effective slope and the type of development (residential development or Special Fire Protection Purpose).

In accordance with section 8.3.10 of PBP the measures, including Asset Protection Zones, for Infill Residential Development (Chapter 7) should be used as a base for the development of a package of measures for Commercial development.

The Acceptable Solution under Table 7.4a of PBP requires APZs be provided in accordance with Table A1.12.2 or bushfire design modelling demonstrating the maximum radiant heat will not exceed 29kW/m², consistent with that for residential subdivisions.

The minimum required APZs in accordance with A1.12.2 of PBP are 11 metres to the remnant hazard to the east, 29 metres to the forest hazard to the southeast and 24 metres to the forest hazard to the northwest.

The APZs to the office were measured to be >34 metres to the remnant hazard to the east, >91 metres to the forest hazard to the southeast and >115 metres to the forest hazard to the northwest, significantly exceeding the minimum required APZs.

It is acknowledged that there is a fuel bay being installed next to the existing hardstand and a 100 metre APZ will be required around this fuel bay.

Construction

Australian Standard 3959 – 2018 'Construction of buildings in bushfire-prone areas' (AS3959) specifies construction standards for buildings within various Bushfire Attack Levels as determined by Planning for Bush Fire Protection – 2019.

AS3959 provides for six (6) levels of building construction these being BAL - Low, BAL - 12.5, BAL - 19, BAL - 29, BAL - 40 and BAL - FZ.

Bushfire Attack Level	Maximum radiant heat impact (kW/m ²)	Level of construction under AS3959-2018
Low		No special construction requirements
12.5	≤12.5	BAL - 12.5
19	12.6 to 19.0	BAL - 19
29	19.1 to 29.0	BAL - 29
40	29.1 to 40.0	BAL - 40
Flame Zone	>40.0	BAL FZ No deemed to satisfy provisions

Table 01: Correlation between bushfire impact and AS3959

The highest Bushfire Attack Level to the proposed buildings was determined from Table A1.12.5 of PBP to be BAL 12.5.

The National Construction Code does not provide for any bush fire specific performance requirements for Class 5 to 8 structures and as such Australian Standard 3959 'Construction of buildings in bushfire-prone areas' 2018 does not apply as a set of 'deemed to satisfy' provisions.

Section 8.3.1 of PBP states:

Whilst bush fire is not captured in the NCC for Class 5-8 buildings, the following objectives will be applied in relation to access, water and services, and emergency and evacuation planning:

- *to provide safe access to/from the public road system for firefighters providing property protection during a bush fire and for occupant egress for evacuation;*
- *to provide suitable emergency and evacuation (and relocation) arrangements for occupants of the development;*
- *to provide adequate services of water for the protection of buildings during and after the passage of bush fire, and to locate gas and electricity so as not to contribute to the risk of fire to a building; and*
- *provide for the storage of hazardous materials away from the hazard wherever possible.*

The general fire safety construction provisions (of the NCC) are taken as acceptable solutions however construction requirements for bush fire protection will need to be considered on a case-by-case basis.

The proposed office will be constructed to sections 3 and 5 (BAL 12.5) under AS3959 – 2018 and the additional construction requirements detailed in section 7.5 of PBP.

The retained managers residence is to be upgraded to improve ember protection. This is to be achieved by enclosing all openings (excluding roof tile spaces) or covering openings with a non-corrosive metal screen mesh with a maximum aperture of 2mm. Where applicable, this includes openable windows, vents, weepholes and eaves. External doors are to be fitted with draft excluders.

We are satisfied that in combination with the recommendations contained within this assessment that the proposal will satisfy the above objectives.

Access

The subject property has street frontage to Nelson Bay Road to the south.

The proposed access road provides a minimum 6-metre-wide carriageway which is capable of holding trucks as part of the quarry operations.

Fire services can access the hazard via the existing road network or proposed access for hazard reduction or fire suppression activities.

Access and opportunities for occupant evacuation are considered adequate for this property.

Services – Water, electricity & gas

There are no in-ground hydrants available along surrounding streets for the replenishment of attending fire services.

The proposal will include a 20,000L Static Water Supply in accordance with Table 7.4a of PBP.

The proposed building will have a new connection to the existing electrical network.

There is no gas connections proposed.

The proposed water supply is adequate for this development.

Bushfire Emergency management arrangements

Evacuation is possible by utilising existing road infrastructure.

This assessment includes a recommendation that a Bushfire Emergency Management and Evacuation Plan is created for the site.

6.04 Aim & Objectives

The following table details the aim and objectives of *Planning for Bush Fire Protection* 2019 and the proposal's ability to comply.

Aim / Objective	Comment
<i>The aim of PBP is to provide for the protection of human life and minimise impacts on property from the threat of bush fire, while having due regard to development potential, site characteristics and protection of the environment.</i>	With the inclusion of the recommendations made herein it is of our opinion that the aim of PBP has been satisfied.
<i>(i) afford buildings and their occupants protection from exposure to a bush fire;</i>	The proposed buildings construction type in conjunction with the available APZs and additional measures included herein will protect occupants from exposures to a bushfire.
<i>(ii) provide for a defensible space to be located around buildings;</i>	There are defensible spaces available to the identified hazards, being the managed land and proposed roads within the subject property.

Aim / Objective	Comment
<i>(iii) provide appropriate separation between a hazard and buildings which, in combination with other measures, prevent the likely fire spread to buildings;</i>	The APZs, in conjunction with construction measures will prevent the likely fire spread to the buildings.
<i>(iv) ensure that appropriate operational access and egress for emergency service personnel and occupants is available;</i>	The proposed access and existing road network provide appropriate operational access and egress for emergency services.
<i>(v) provide for ongoing management and maintenance of bush fire protection measures, (BPMs); and</i>	All grounds within the processing and sales area and for a minimum distance of 100 metres or subject boundary whichever comes first will be maintained in accordance with an Asset Protection Zone / Inner Protection Area as detailed in Appendix 4 of Planning for Bush Fire Protection 2019 and the NSW Rural Fire Service publication 'Standards for Asset Protection Zones'.
<i>(vi) ensure that utility services are adequate to meet the needs of firefighters.</i>	The proposed water supply is adequate for the replenishment of attending fire services.

It is of our opinion that the proposal can satisfactorily comply with the aim and objectives of Planning for Bush Fire Protection 2019.

7.0 Recommendations

The following recommendations are provided as the minimum necessary for compliance with Planning for Bush Fire Protection – 2019. Additional recommendations are provided to supplement these minimum requirements where considered necessary.

Asset Protection Zones

1. At the commencement of construction works and in perpetuity all areas within the processing and sales area and for a minimum distance of 100 metres or subject boundary whichever comes first from the office shall be maintained as an Asset Protection Zone (Inner Protection Area) as detailed in the NSW Rural Fire Service's document 'Standards for Asset Protection Zones' and Appendix 4 of *Planning for Bush Fire Protection* 2019.

Construction

2. That all new works for the proposed building shall comply with sections 3 and 5 (BAL 12.5) Australian Standard AS3959-2018 "Construction of buildings in bush fire-prone areas" and section 7.5 of *"Planning for Bush Fire Protection - 2019"*.
3. The existing dwelling is to be upgraded to improve ember protection. This is to be achieved by enclosing all openings (excluding roof tile spaces) or covering openings with a non-corrosive metal screen mesh with a maximum aperture of 2mm. Where applicable, this includes openable windows, vents, weepholes and eaves. External doors are to be fitted with draft excluders

Landscaping

4. That any new landscaping within the Asset Protection Zones is to comply with Table 7.4a of *Planning for Bush Fire Protection* 2019.

Gas (where applicable)

5. That any new gas services are to comply with Table 7.4a of Planning for Bush Fire Protection 2019 as follows:
 - reticulated or bottled gas is installed and maintained in accordance with AS/NZS 1596:2014 and the requirements of relevant authorities, and metal piping is used;
 - all fixed gas cylinders are kept clear of all flammable materials to a distance of 10m and shielded on the hazard side;
 - connections to and from gas cylinders are metal;
 - polymer-sheathed flexible gas supply lines are not used; and
 - above-ground gas service pipes are metal, including and up to any outlets.

Emergency Management

6. That the bushfire emergency management plan to be prepared and is to be consistent with the NSW Rural Fire Service Guidelines for the *Preparation of Emergency / Evacuation Plan*.

Water

7. That a 20,000 litre static water supply be provided within the subject property, where this supply is a water tank it shall comply with the following;
 - a connection for firefighting purposes is located within the IPA or non-hazard side and away from the structure; 65mm Storz outlet with a ball valve is fitted to the outlet;
 - ball valve and pipes are adequate for water flow and are metal;
 - supply pipes from tank to ball valve have the same bore size to ensure flow volume;
 - underground tanks have an access hole of 200mm to allow tankers to refill direct from the tank;
 - above-ground tanks are manufactured from concrete or metal;
 - raised tanks have their stands constructed from non-combustible material or bush fire-resisting timber (see Appendix F of AS 3959);
 - unobstructed access can be provided at all times;
 - underground tanks are clearly marked;
 - tanks on the hazard side of a building are provided with adequate shielding for the protection of firefighters;
 - all exposed water pipes external to the building are metal, including any fittings;
 - that a 5hp or 3kW petrol or diesel-powered pump and 19mm internal diameter fire hose capable of reaching all points of the building is provided
 - fire hose reels are constructed in accordance with AS/NZS 1221:1997, and installed in accordance with the relevant clauses of AS 2441:2005.

Access

8. That any new access roads comply with the following requirements for Property Access as detailed in section 7.4 of Planning for Bush Fire Protection 2019:
 - property access roads are two-wheel drive, all-weather roads;
 - a minimum vertical clearance of 4m to any overhanging obstructions, including tree branches;
 - curves have a minimum inner radius of 6m and are minimal in number to allow for rapid access and egress;
 - the minimum distance between inner and outer curves is 6m;
 - the crossfall is not more than 10 degrees;
 - maximum grades for sealed roads do not exceed 15 degrees and not more than 10 degrees for unsealed roads; and

8.0 Conclusion

The development is located at 3631 Nelson Bay Road, Bobs Farm (the site) and through the State Significant Development Application (SSDA) process, the applicant is seeking to:

Through the State Significant Development Application (SSDA) process, the applicant is seeking to develop the site for an extractive industry as a sand quarry. Consent is sought for annual extraction of 530,000tpa for 10 years, equating to a total life-of-quarry sand extraction of approximately 4.4 million tonnes. It is anticipated the proposal would average sales of 10,000 to 20,000 tonnes per week.

In this instance the site is depicted on Port Stephens Council's Bushfire Prone Land Map (BPLM) as containing designated Vegetation Category 1 and 3. The site is therefore considered 'bushfire prone land'.

In relation to this application of the issued Secretary's Environmental Assessment Requirements (SEARs) requires a bush fire assessment that details proposed bush fire protection measures and demonstrates compliance with Planning for Bush Fire Protection 2019 (PBP).

In accordance with the bushfire safety measures contained in this report, and consideration of the site specific bushfire risk assessment it is our opinion that when combined, they will provide a reasonable and satisfactory level of bushfire protection to the subject development.

It is of our opinion that the proposal satisfies all relevant specifications and requirements of PBP.

We are therefore in support of the development.

Should you have any enquiries regarding this project please contact our office.

Prepared by
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BPAD Accreditation No. BPAD9400



9.0 Annexure 01

List of Referenced Documents

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Acknowledgements to:

Geoscience Australia
Street-directory.com.au
Nearmap

Attachments

N/A